

# SERVICE MANUAL

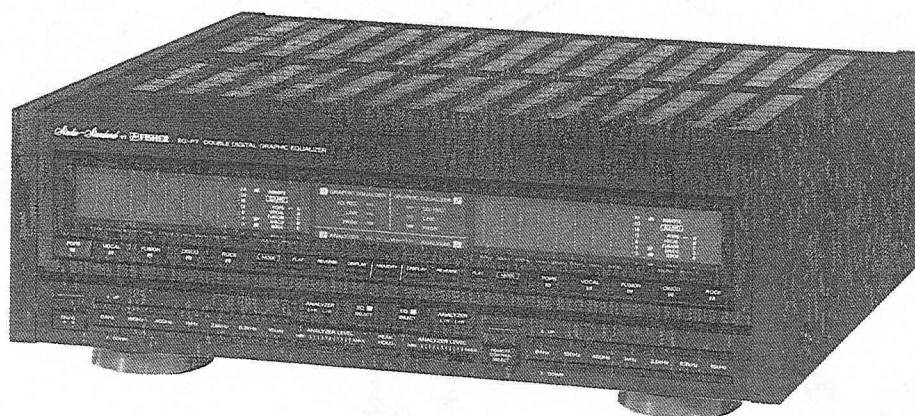


# FISHER

## GRAPHIC EQUALIZER

# EQ-P7

(EUROPE)



139 229 40

## SPECIFICATIONS

Input Impedance .....	50k $\Omega$
Output Impedance .....	2k $\Omega$
T.H.D. (Flat Position)	
at 1V Output .....	0.02%
at 5V Output .....	0.005%
Gain (Flat Position) .....	+0dB, -0.5dB
Max. Output Voltage at 1% T.H.D. ....	8.5V
Frequency Response	
20Hz - 20kHz .....	$\pm 0.5$ dB
Tone Control Response	
Center of Frequency .....	$\pm 10$ %
64Hz .....	$\pm 12$ dB
160Hz .....	$\pm 12$ dB
400Hz .....	$\pm 12$ dB
1kHz .....	$\pm 12$ dB
2.5kHz .....	$\pm 12$ dB
6.3kHz .....	$\pm 12$ dB
16kHz .....	$\pm 12$ dB

S/N (IHF A, Reference 1V, Flat Position) .....	100dB
Crosstalk	
20Hz .....	-80dB
1kHz .....	-80dB
20kHz .....	-75dB

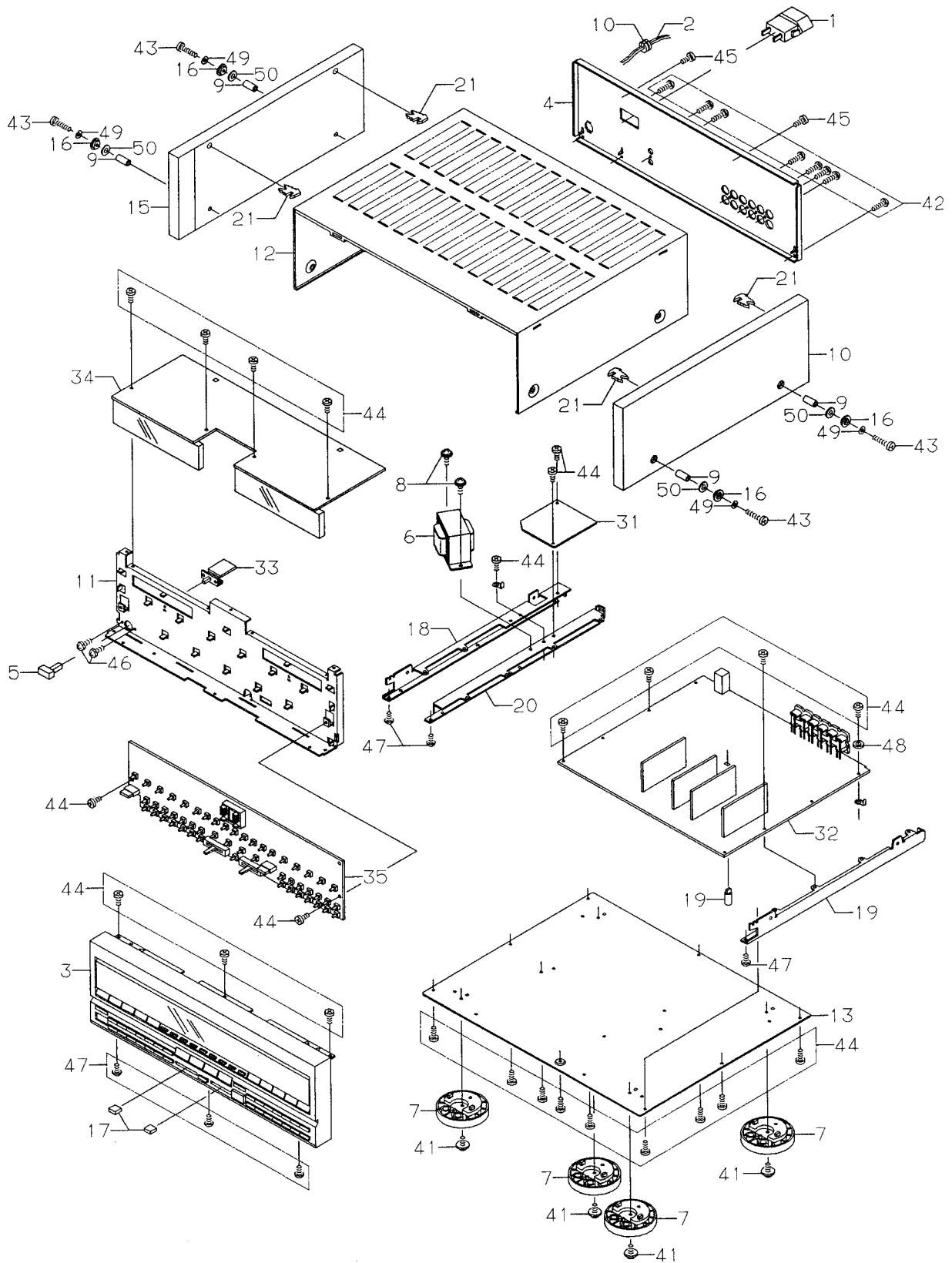
### GENERAL

Power Requirements (50/60Hz) .....	AC: 220V
Power Consumption .....	13W
Dimensions (WxHxD) .....	390 x 130 x 310 mm
Weight (approx) .....	4.7 kg

— Specifications and design are subject to change without notice. —

REFERENCE No. WM-570267

# CABINET EXPLODED VIEW





## CABINET PARTS LIST

Ref. No.	Part No.	Description	Q'ty
<b>PACKAGE</b>			
	620 200 2859	Inner Carton	1
	620 183 1566	Pad (Right)	1
	620 183 1573	Pad (Left)	1
	620 059 7340	Patching Sheet	1
	620 062 0543	Serial No. Sheet	1
	620 148 8012	Sheet Polyethylene	1
<b>ACCESSORIES</b>			
	620 021 7385	RCA Cord 700mm Black	4
	620 182 8917	Auto Function Cord 700mm Black	1
	620 199 9860	Instruction Manual	1
	620 057 8776	Bag Fan	1
	620 062 0543	Serial No. Sheet	1
	620 152 2624	Certificate Card	1
<b>CABINET</b>			
	620 022 3454	Terminal Lug	2
	620 062 0543	Serial No. Sheet	1
	620 125 8424	Wire Band	7
1	△ 620 017 1212	AC Socket	1
2	△ 620 023 7550	Power Cord	1
3	620 200 4419	Assy,Cabinet	1
4	620 200 1715	Panel,Rear	1
5	620 200 2811	Knob,ON/Standby	1
6	△ 620 199 2984	Power Trans,SEV	1
7	620 190 5649	Leg Assy	4
8	620 051 3708	Screw Braz. HD. + M3X8	2
9	620 183 0965	Spacer	4
10	620 053 2129	Bushing (4N-4)	1
11	620 093 1359	Panel Front	1
12	620 094 8746	Cover Top	1
13	620 185 2950	Plate Bottom	1
14	620 190 6233	Side Wood Right	1
15	620 190 6240	Side Wood Left	1
16	620 183 8626	Wood Cap	4
17	620 109 6460	Knob Slide Volume	2
18	620 117 2744	Metal Mount (Left)	1
19	620 117 2751	Metal Mount (Right)	1
20	620 117 2775	Metal Mount (Center)	1
21	620 184 0445	Bracket-Cover	4
31	620 200 1586	Assy,PCB,AC Power	1
32	620 200 1609	Assy,PCB,Main	1
33	620 080 8620	Assy,PCB,Power Switch	1
34	620 080 8637	Assy,PCB,Spectrum Analyzer	1
35	620 080 8644	Assy,PCB,Switch	1
41	411 020 7700	SCR S-TPG BRZ 3X6	4
42	411 099 9803	SCR S-TPG BRZ 3X8	8
43	411 098 4304	SCR S-TPG BIN 3X25	4
44	411 021 5705	SCR S-TPG BIN 3X6	25
45	411 021 5903	SCR S-TPG BIN 3X6	2
46	411 003 8908	SCR PAN + SW 3X6	2
47	411 067 6902	SCR TPG PAN 3X5	6
48	411 008 1300	WASHER SPR 3	1
49	411 110 1403	WASHER Z 3.4X8X0.5	4
50	411 008 9702	WASHER Z 4.2X10X0.8	4

### NOTES:

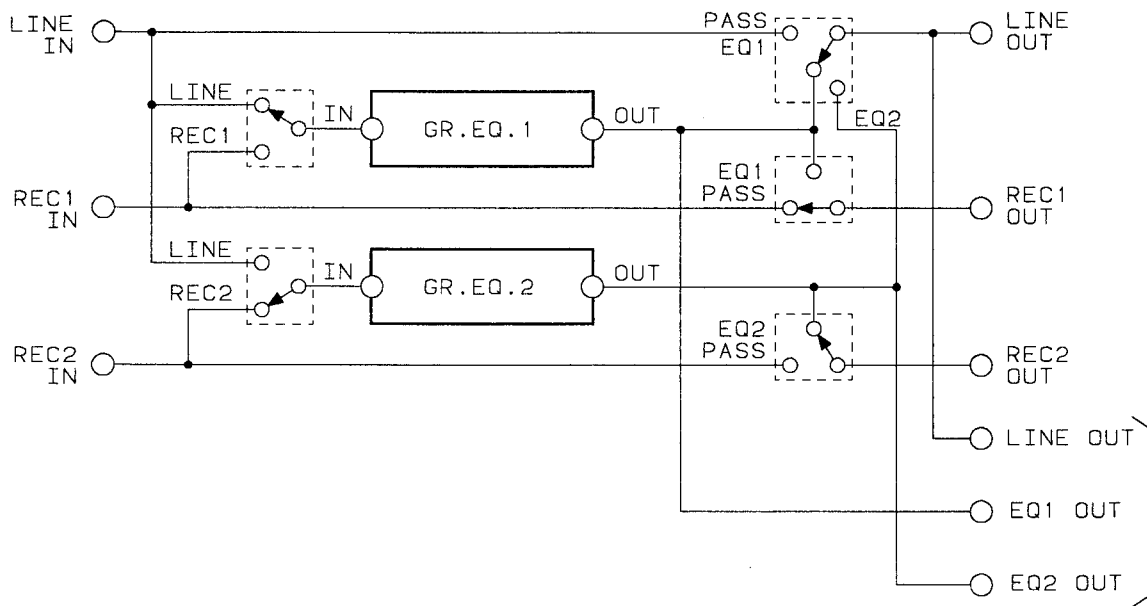
- Parts order must contain Model Number, Part Number and Description.
- Ordering quantity of screws and resistors must be multiple of 10 pcs.

### PRODUCT SAFETY NOTICE

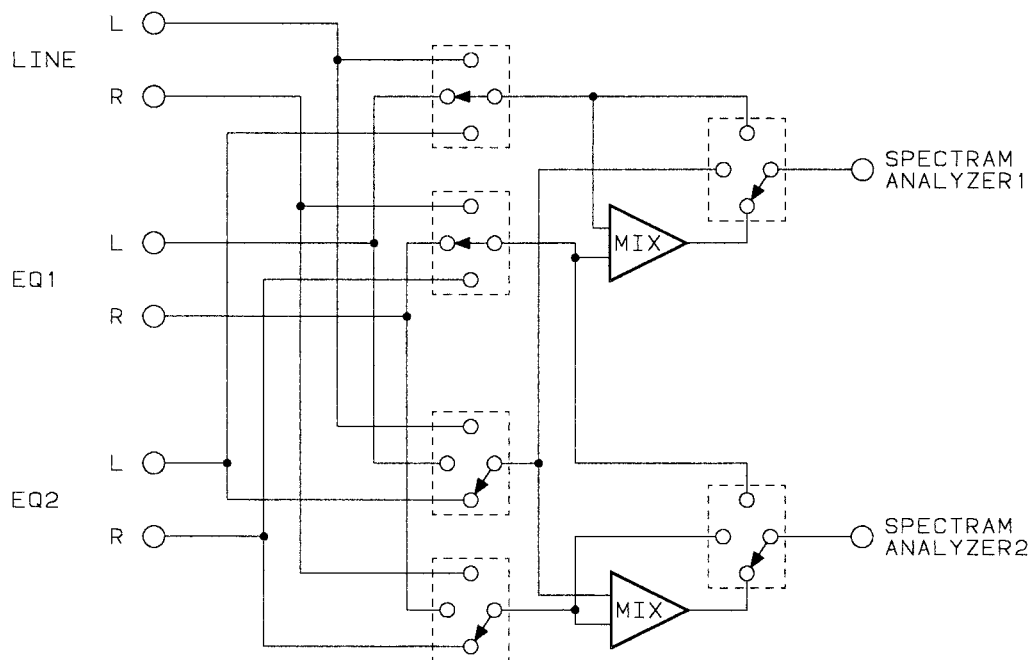
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol △ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with △, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

## BLOCK DIAGRAM

AUDIO SIGNAL LINE



SPECTRAM ANALYZER SIGNAL LINE



## OPERATION

When the power is switched on, the EQ Level display of the EQ1 and EQ2 show for five seconds and all indicators go out. If the Last Memory is kept unchanged and the power is switched on again, the same indicators will light as you operated last.

Since the Audio Line is changed by the ANALOGUE switch, power will be supplied even though the power is off. If the power plug is disconnected, all Audio Lines will turn off.

When the UP/DOWN, Preset, FLAT, Reverse, or Memory key is pressed, the EQ Level display is shown for five seconds (Memory display of the EQ1 and EQ2 show) and then the spectrum analyzer display is shown.

The spectrum analyzer display shows the mixed left and right output equalized by the selected source such as a tape, CD, or record. When the EQ1 is set to PASS and EQ2 is set to LINE or REC2, the spectrum analyzer of EQ1 shows the same display as EQ2 mixed source. When both EQ1 and EQ2 are set to PASS, the spectrum analyzer is shown by the mixed LINE OUT. The L ch of the spectrum analyzer 1 and R ch of the spectrum analyzer 2 are displayed by the selected source for EQ1 or EQ2.

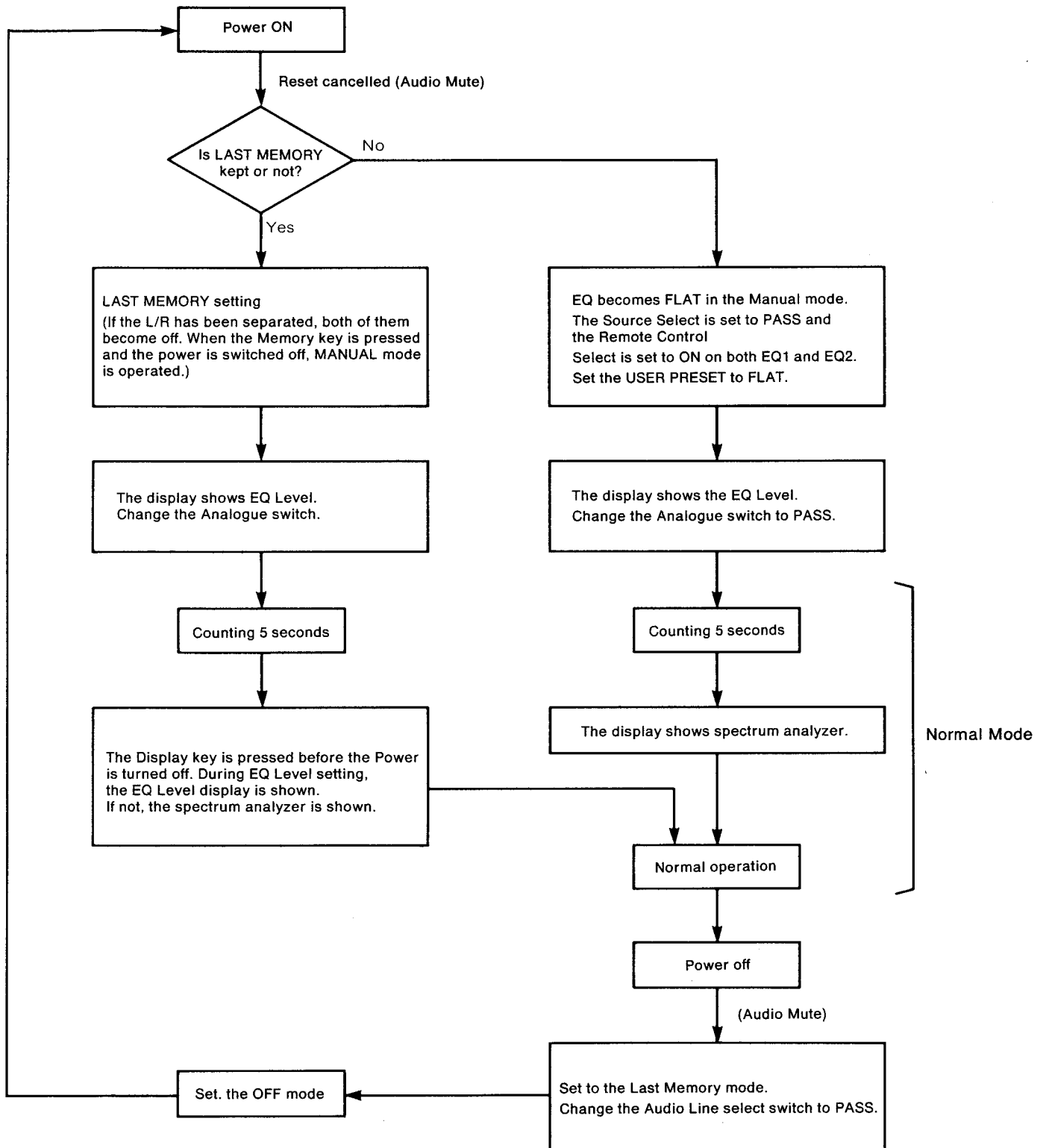
When the Memory key is pressed, the Preset displays of EQ1 and EQ2 go out and EQ Level displays on them are shown instead.

## CHANGING THE DISPLAYS BY KEY INPUT

1. The equalizer level is shown depending on pressing the UP or DOWN key.
2. When the UP or DOWN key is pressed in the spectrum analyzer display mode, the display appears again after 5 seconds when the key is pressed.
3. When the key is pressed while the equalizer level is in the PRESET mode, the MANUAL mode is set. In this case, the Preset No. goes out.
4. In the R/L separated spectrum analyzer display, press any key and after 5 seconds the original mode will be recovered.
5. During the equalizer level display mode, though a key is pressed, the operation continues with the equalizer level display remaining after 5 seconds.

## KEY PRESSED AND DISPLAY OPERATION

### ● Power Switch



If the power plug is disconnected, the Last Memory and content of the memory are remained for a certain period of time. If the power plug is connected in the Power ON mode, power is turned on. When the power plug is disconnected, no Audio signal is output.

# P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>ASSY,PCB,AC POWER</b>				or	405 004 3901	TR 2SA608-E-NP	1
31	620 200 1586	Assy,PCB,AC Power	1	Q123	405 004 4502	TR 2SA608-F-NP	1
	620 022 2587	EC Terminal 1P	2	or	405 004 3901	TR 2SA608-E-NP	1
F901	423 006 4702	FUSE 250V T2.5A	1	Q124	405 004 4502	TR 2SA608-F-NP	1
	620 031 4763	Wire Wrap Terminal	4	or	405 004 3901	TR 2SA608-E-NP	1
<b>ASSY,PCB,MAIN</b>				C51	403 071 5903	CERAMIC 220P K 50V	1
32	620 200 1609	Assy,PCB,Main	1	C52	403 071 5903	CERAMIC 220P K 50V	1
	620 017 2721	Fuse Clip	4	C53	403 069 0705	CERAMIC 1000P K 50V	1
	411 020 7700	SCR S-TPG BRZ 3X6	3	C54	403 069 0705	CERAMIC 1000P K 50V	1
	620 031 4763	Wire Wrap Terminal	6	C55	403 071 7501	CERAMIC 2200P K 50V	1
	620 050 4409	Mount P.C.B	1	C56	403 071 7501	CERAMIC 2200P K 50V	1
	620 053 9012	Plate Heat Sink	1	C57	403 071 5903	CERAMIC 220P K 50V	1
	620 053 9050	Plate Heat Sink	1	C58	403 071 5903	CERAMIC 220P K 50V	1
	620 055 2523	Jumper	1	C59	403 069 0705	CERAMIC 1000P K 50V	1
	620 055 2523	Jumper	1	C60	403 069 0705	CERAMIC 1000P K 50V	1
	620 055 3841	Jumper	1	C61	403 071 7501	CERAMIC 2200P K 50V	1
CN101	620 020 7133	Socket Jumper 11P	1	C62	403 071 7501	CERAMIC 2200P K 50V	1
CN102	620 018 1884	Socket Jumper 10P	1	C63	403 071 5903	CERAMIC 220P K 50V	1
CN103	620 020 3753	Socket Jumper 7P	1	C64	403 071 5903	CERAMIC 220P K 50V	1
CN104	620 020 5818	Socket Jumper 6P	1	C65	403 069 0705	CERAMIC 1000P K 50V	1
CN105	620 020 7133	Socket Jumper 11P	1	C66	403 069 0705	CERAMIC 1000P K 50V	1
CN106	620 020 5801	Socket Jumper 5P	1	C67	403 071 7501	CERAMIC 2200P K 50V	1
CS1	620 007 3349	Ceramic.OSC CSA4.00	1	C68	403 071 7501	CERAMIC 2200P K 50V	1
F101	423 003 7201	FUSE 250V T0.5A	1	C69	403 071 5903	CERAMIC 220P K 50V	1
F102	423 003 7201	FUSE 250V T0.5A	1	C70	403 071 5903	CERAMIC 220P K 50V	1
JK101	620 017 8792	Pin Jack 8P	1	C71	403 071 5903	CERAMIC 220P K 50V	1
JK102	620 017 2455	Pin Jack 4P	1	C72	403 071 5903	CERAMIC 220P K 50V	1
JK103	620 018 1839	Jack 5P	1	C74	403 071 5903	CERAMIC 220P K 50V	1
RA101	620 004 5711	Resistor 8X1M	1	C75	403 071 5903	CERAMIC 220P K 50V	1
RA102	620 004 5711	Resistor 8X1M	1	C76	403 071 5903	CERAMIC 220P K 50V	1
RA103	620 004 5711	Resistor 8X1M	1	C77	403 071 5903	CERAMIC 220P K 50V	1
RA104	620 004 5711	Resistor 8X1M	1	C78	403 072 2703	CERAMIC 0.022U Z 50V	1
IC101	409 018 5203	IC LA6462D	1	C79	403 072 2703	CERAMIC 0.022U Z 50V	1
IC102	409 018 5203	IC LA6462D	1	C80	403 072 2703	CERAMIC 0.022U Z 50V	1
IC103	409 018 5203	IC LA6462D	1	C81	403 072 2703	CERAMIC 0.022U Z 50V	1
IC104	409 109 5204	IC LC7822	1	C82	403 072 2703	CERAMIC 0.022U Z 50V	1
IC105	409 109 5303	IC LC7823	1	C101	403 071 5903	CERAMIC 220P K 50V	1
IC106	409 109 5303	IC LC7823	1	C102	403 071 5903	CERAMIC 220P K 50V	1
IC107	409 018 5203	IC LA6462D	1	C103	403 049 1609	ELECT 1U M 50V	1
IC108	409 018 5203	IC LA6462D	1	C104	403 049 1609	ELECT 1U M 50V	1
IC109	409 018 5203	IC LA6462D	1	C105	403 049 5409	ELECT 10U M 50V	1
IC110	409 088 4007	IC LC7522	1	C106	403 049 5409	ELECT 10U M 50V	1
IC111	409 088 4007	IC LC7522	1	C107	403 045 0507	ELECT 100U M 25V	1
IC112	409 146 9401	IC LC6520C-3629	1	C108	403 045 0507	ELECT 100U M 25V	1
D101	407 003 6501	DIODE DBA20C-K15	1	C109	403 071 5903	CERAMIC 220P K 50V	1
D102	407 050 6202	ZENER DIODE GZA6.2Y-BT	1	C110	403 071 5903	CERAMIC 220P K 50V	1
D103	407 049 7807	ZENER DIODE GZA18Y-BT	1	C111	403 049 1609	ELECT 1U M 50V	1
D104	407 049 7807	ZENER DIODE GZA18Y-BT	1	C112	403 049 1609	ELECT 1U M 50V	1
D105	407 050 6608	ZENER DIODE GZA6.8Y-BT	1	C113	403 049 5409	ELECT 10U M 50V	1
D106	407 050 6608	ZENER DIODE GZA6.8Y-BT	1	C114	403 049 5409	ELECT 10U M 50V	1
D107	407 051 0803	ZENER DIODE GZB27B	1	C115	403 045 0507	ELECT 100U M 25V	1
D108	407 050 6103	ZENER DIODE GZA6.2X-BT	1	C116	403 045 0507	ELECT 100U M 25V	1
D109	407 005 3805	DIODE DS442-BT	1	C117	403 071 5903	CERAMIC 220P K 50V	1
D110	407 005 3805	DIODE DS442-BT	1	C118	403 071 5903	CERAMIC 220P K 50V	1
D111	407 005 3805	DIODE DS442-BT	1	C119	403 049 1609	ELECT 1U M 50V	1
D112	407 005 3805	DIODE DS442-BT	1	C120	403 049 1609	ELECT 1U M 50V	1
D113	407 005 3805	DIODE DS442-BT	1	C121	403 049 5409	ELECT 10U M 50V	1
D114	407 005 3805	DIODE DS442-BT	1	C122	403 049 5409	ELECT 10U M 50V	1
D117	407 008 0405	DIODE GMB01-BT	1	C123	403 045 0507	ELECT 100U M 25V	1
D118	407 008 0405	DIODE GMB01-BT	1	C124	403 045 0507	ELECT 100U M 25V	1
D121	407 005 2105	DIODE DS135D-KB3	1	C125	403 059 6601	POLYESTER 0.022U K 50V	1
D122	407 005 2105	DIODE DS135D-KB3	1	C126	403 045 0507	ELECT 100U M 25V	1
Q105	405 022 5000	TR 2SD1406-Y	1	C127	403 059 6601	POLYESTER 0.022U K 50V	1
Q106	405 022 5000	TR 2SD1406-Y	1	C128	403 059 6601	POLYESTER 0.022U K 50V	1
Q107	405 027 0505	TR 2SK246-GR	1	C129	403 045 0507	ELECT 100U M 25V	1
Q108	405 006 8102	TR 2SB1015-Y	1	C130	403 059 6601	POLYESTER 0.022U K 50V	1
Q109	405 027 0505	TR 2SK246-GR	1	C131	403 045 0507	ELECT 100U M 25V	1
Q110	405 004 4502	TR 2SA608-F-NP	1	C132	403 059 6601	POLYESTER 0.022U K 50V	1
or	405 004 3901	TR 2SA608-E-NP	1	C133	403 059 6601	POLYESTER 0.022U K 50V	1
Q111	405 019 2708	TR 2SC536-F-NP	1	C134	403 045 0507	ELECT 100U M 25V	1
or	405 019 1909	TR 2SC536-E-NP	1	C135	403 074 9007	CERAMIC 680P K 50V	1
Q112	405 019 2708	TR 2SC536-F-NP	1	C136	403 059 6601	POLYESTER 0.022U K 50V	1
or	405 019 1909	TR 2SC536-E-NP	1	C137	403 045 0507	ELECT 100U M 25V	1
Q113	405 019 2708	TR 2SC536-F-NP	1	C138	403 059 6601	POLYESTER 0.022U K 50V	1
or	405 019 1909	TR 2SC536-E-NP	1	C139	403 059 6601	POLYESTER 0.022U K 50V	1
Q114	405 034 6804	TR DTA114-ES	1	C140	403 045 0507	ELECT 100U M 25V	1
Q115	405 034 6804	TR DTA114-ES	1	C141	403 049 1609	ELECT 1U M 50V	1
Q122	405 004 4502	TR 2SA608-F-NP	1	C142	403 049 1609	ELECT 1U M 50V	1
				C143	403 049 5409	ELECT 10U M 50V	1

## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty	Ref. No.	Part No.	Description				Q'ty
C144	403 049 5409	ELECT	10U	M	50V	1	C223	403 049 1609	ELECT	1U	M	50V	1
C145	403 045 0507	ELECT	100U	M	25V	1	C224	404 032 2207	ELECT	2200U	M	10V	1
C146	403 045 0507	ELECT	100U	M	25V	1	C225	403 018 4204	CERAMIC	22P	K	50V	1
C147	403 049 1609	ELECT	1U	M	50V	1	C226	403 022 5907	CERAMIC	33P	J	50V	1
C148	403 049 1609	ELECT	1U	M	50V	1	C227	403 022 5907	CERAMIC	33P	J	50V	1
C149	403 049 5409	ELECT	10U	M	50V	1	C228	403 038 7209	ELECT	220U	M	6.3V	1
C150	403 049 5409	ELECT	10U	M	50V	1	C229	403 069 8404	CERAMIC	0.01U	Z	50V	1
C151	403 008 5204	CERAMIC	10P	D	50V	1	C230	403 053 4405	ELECT	2200U	M	35V	1
C152	403 008 5204	CERAMIC	10P	D	50V	1	C231	403 053 4405	ELECT	2200U	M	35V	1
C153	403 045 0507	ELECT	100U	M	25V	1	C233	403 136 1604	ELECT	47U	M	100V	1
C154	403 045 0507	ELECT	100U	M	25V	1	C234	403 136 1604	ELECT	47U	M	100V	1
C155	403 049 1609	ELECT	1U	M	50V	1	C235	404 012 7000	CERAMIC	0.01U	P	500V	1
C156	403 049 1609	ELECT	1U	M	50V	1	C236	404 012 7000	CERAMIC	0.01U	P	500V	1
C157	403 049 5409	ELECT	10U	M	50V	1	C237	403 074 2701	CERAMIC	0.047U	Z	50V	1
C158	403 049 5409	ELECT	10U	M	50V	1	C240	403 072 2703	CERAMIC	0.022U	Z	50V	1
C159	403 045 0507	ELECT	100U	M	25V	1	C241	403 074 2701	CERAMIC	0.047U	Z	50V	1
C160	403 045 0507	ELECT	100U	M	25V	1	C242	403 074 2701	CERAMIC	0.047U	Z	50V	1
C161	403 045 0507	ELECT	100U	M	25V	1	R51	401 024 7004	CARBON	1K	JA	1/6W	1
C162	403 045 0507	ELECT	100U	M	25V	1	R52	401 024 7004	CARBON	1K	JA	1/6W	1
C163	403 051 2007	ELECT	4.7U	M	50V	1	R53	401 026 9303	CARBON	47	JA	1/6W	1
C164	403 051 2007	ELECT	4.7U	M	50V	1	R54	401 026 9303	CARBON	47	JA	1/6W	1
C165	403 049 5409	ELECT	10U	M	50V	1	R55	401 024 7004	CARBON	1K	JA	1/6W	1
C166	403 049 5409	ELECT	10U	M	50V	1	R56	401 024 7004	CARBON	1K	JA	1/6W	1
C167	403 059 4102	POLYESTER	2200P	K	50V	1	R57	401 019 9600	CARBON	47	JA	1/4W	1
C168	403 059 4102	POLYESTER	2200P	K	50V	1	R58	401 019 9600	CARBON	47	JA	1/4W	1
C169	403 061 8709	POLYESTER	4700P	K	50V	1	R59	401 024 7004	CARBON	1K	JA	1/6W	1
C170	403 061 8709	POLYESTER	4700P	K	50V	1	R60	401 024 7004	CARBON	1K	JA	1/6W	1
C171	403 057 8003	POLYESTER	0.012U	K	50V	1	R61	401 026 9303	CARBON	47	JA	1/6W	1
C172	403 057 8003	POLYESTER	0.012U	K	50V	1	R62	401 026 9303	CARBON	47	JA	1/6W	1
C173	403 067 7201	MT-COMPO	0.033U	J	50V	1	R101	401 024 7004	CARBON	1K	JA	1/6W	1
C174	403 067 7201	MT-COMPO	0.033U	J	50V	1	R102	401 024 7004	CARBON	1K	JA	1/6W	1
C175	403 067 8406	MT-COMPO	0.082U	J	50V	1	R103	401 024 7707	CARBON	100K	JA	1/6W	1
C176	403 067 8406	MT-COMPO	0.082U	J	50V	1	R104	401 024 7707	CARBON	100K	JA	1/6W	1
C177	403 067 6709	MT-COMPO	0.22U	J	50V	1	R105	401 024 7004	CARBON	1K	JA	1/6W	1
C178	403 067 6709	MT-COMPO	0.22U	J	50V	1	R106	401 024 7004	CARBON	1K	JA	1/6W	1
C179	403 067 7805	MT-COMPO	0.47U	J	50V	1	R107	401 024 7707	CARBON	100K	JA	1/6W	1
C180	403 067 7805	MT-COMPO	0.47U	J	50V	1	R108	401 024 7707	CARBON	100K	JA	1/6W	1
C181	403 044 0201	ELECT	47U	M	16V	1	R109	401 024 7004	CARBON	1K	JA	1/6W	1
C182	403 069 8404	CERAMIC	0.01U	Z	50V	1	R110	401 024 7004	CARBON	1K	JA	1/6W	1
C183	403 044 0201	ELECT	47U	M	16V	1	R111	401 024 7707	CARBON	100K	JA	1/6W	1
C184	403 044 0201	ELECT	47U	M	16V	1	R112	401 024 7707	CARBON	100K	JA	1/6W	1
C185	403 045 0507	ELECT	100U	M	25V	1	R113	401 024 7707	CARBON	100K	JA	1/6W	1
C186	403 045 0507	ELECT	100U	M	25V	1	R114	401 024 7707	CARBON	100K	JA	1/6W	1
C187	403 051 2007	ELECT	4.7U	M	50V	1	R115	401 024 7707	CARBON	100K	JA	1/6W	1
C188	403 051 2007	ELECT	4.7U	M	50V	1	R116	401 024 7707	CARBON	100K	JA	1/6W	1
C189	403 049 5409	ELECT	10U	M	50V	1	R117	401 024 7707	CARBON	100K	JA	1/6W	1
C190	403 049 5409	ELECT	10U	M	50V	1	R118	401 024 7707	CARBON	100K	JA	1/6W	1
C191	403 059 4102	POLYESTER	2200P	K	50V	1	R119	401 017 0807	CARBON	270	JA	1/4W	1
C192	403 059 4102	POLYESTER	2200P	K	50V	1	R120	401 017 0807	CARBON	270	JA	1/4W	1
C193	403 061 8709	POLYESTER	4700P	K	50V	1	R121	401 024 7707	CARBON	100K	JA	1/6W	1
C194	403 061 8709	POLYESTER	4700P	K	50V	1	R122	401 024 7707	CARBON	100K	JA	1/6W	1
C195	403 057 8003	POLYESTER	0.012U	K	50V	1	R123	401 024 7707	CARBON	100K	JA	1/6W	1
C196	403 057 8003	POLYESTER	0.012U	K	50V	1	R124	401 024 7707	CARBON	100K	JA	1/6W	1
C197	403 067 7201	MT-COMPO	0.033U	J	50V	1	R125	401 024 7707	CARBON	100K	JA	1/6W	1
C198	403 067 7201	MT-COMPO	0.033U	J	50V	1	R126	401 024 7707	CARBON	100K	JA	1/6W	1
C199	403 067 8406	MT-COMPO	0.082U	J	50V	1	R127	401 017 0807	CARBON	270	JA	1/4W	1
C200	403 067 8406	MT-COMPO	0.082U	J	50V	1	R128	401 017 0807	CARBON	270	JA	1/4W	1
C201	403 067 6709	MT-COMPO	0.22U	J	50V	1	R129	401 024 7707	CARBON	100K	JA	1/6W	1
C202	403 067 6709	MT-COMPO	0.22U	J	50V	1	R130	401 024 7707	CARBON	100K	JA	1/6W	1
C203	403 067 7805	MT-COMPO	0.47U	J	50V	1	R131	401 024 7707	CARBON	100K	JA	1/6W	1
C204	403 067 7805	MT-COMPO	0.47U	J	50V	1	R132	401 024 7707	CARBON	100K	JA	1/6W	1
C205	403 044 0201	ELECT	47U	M	16V	1	R133	401 024 7707	CARBON	100K	JA	1/6W	1
C206	403 069 8404	CERAMIC	0.01U	Z	50V	1	R134	401 024 7707	CARBON	100K	JA	1/6W	1
C207	403 044 0201	ELECT	47U	M	16V	1	R135	401 017 0807	CARBON	270	JA	1/4W	1
C208	403 044 0201	ELECT	47U	M	16V	1	R136	401 017 0807	CARBON	270	JA	1/4W	1
C209	403 052 8107	ELECT	100U	M	35V	1	R137	401 012 5708	CARBON	1K	JA	1/4W	1
C210	403 042 3501	ELECT	100U	M	16V	1	R138	401 012 5708	CARBON	1K	JA	1/4W	1
C211	403 049 5409	ELECT	10U	M	50V	1	R139	401 024 7707	CARBON	100K	JA	1/6W	1
C212	403 045 0507	ELECT	100U	M	25V	1	R140	401 024 7707	CARBON	100K	JA	1/6W	1
C213	403 049 5409	ELECT	10U	M	50V	1	R141	401 017 0807	CARBON	270	JA	1/4W	1
C214	403 045 0507	ELECT	100U	M	25V	1	R142	401 017 0807	CARBON	270	JA	1/4W	1
C215	404 012 7000	CERAMIC	0.01U	P	500V	1	R143	401 024 7400	CARBON	10K	JA	1/6W	1
C216	404 012 7000	CERAMIC	0.01U	P	500V	1	R144	401 017 0807	CARBON	270	JA	1/4W	1
C217	404 012 7000	CERAMIC	0.01U	P	500V	1	R145	401 017 0807	CARBON	270	JA	1/4W	1
C218	404 012 7000	CERAMIC	0.01U	P	500V	1	R146	401 024 7400	CARBON	10K	JA	1/6W	1
C219	403 044 0201	ELECT	47U	M	16V	1	R147	401 017 0807	CARBON	270	JA	1/4W	1
C220	403 044 0201	ELECT	47U	M	16V	1	R148	401 017 0807	CARBON	270	JA	1/4W	1
C221	403 054 1304	ELECT	47U	M	35V	1	R149	401 024 7400	CARBON	10K	JA	1/6W	1
C222	403 045 7100	ELECT	22U	M	25V	1	R150	401 017 0807	CARBON	270	JA	1/4W	1

## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
R151	401 017 0807	CARBON 270 JA 1/4W	1	R234	401 012 7009	CARBON 10K JA 1/4W	1
R152	401 012 5708	CARBON 1K JA 1/4W	1	R235	401 012 7009	CARBON 10K JA 1/4W	1
R153	401 024 7004	CARBON 1K JA 1/6W	1	R236	401 024 7400	CARBON 10K JA 1/6W	1
R154	401 024 7707	CARBON 100K JA 1/6W	1	R237	401 024 7400	CARBON 10K JA 1/6W	1
R155	401 024 7707	CARBON 100K JA 1/6W	1	R238	401 012 7009	CARBON 10K JA 1/4W	1
R156	401 024 7707	CARBON 100K JA 1/6W	1	R239	401 012 7009	CARBON 10K JA 1/4W	1
R157	401 024 7707	CARBON 100K JA 1/6W	1	R240	401 012 7009	CARBON 10K JA 1/4W	1
R158	401 024 7707	CARBON 100K JA 1/6W	1	R246	401 020 2904	CARBON 47K JA 1/4W	1
R159	401 024 7707	CARBON 100K JA 1/6W	1	R247	401 020 2904	CARBON 47K JA 1/4W	1
R160	401 017 0807	CARBON 270 JA 1/4W	1	R248	401 020 2904	CARBON 47K JA 1/4W	1
R161	401 017 0807	CARBON 270 JA 1/4W	1	R249	401 024 7004	CARBON 1K JA 1/6W	1
R162	401 025 8208	CARBON 22K JA 1/6W	1	R250	401 024 7004	CARBON 1K JA 1/6W	1
R163	401 025 8208	CARBON 22K JA 1/6W	1	R251	401 024 7004	CARBON 1K JA 1/6W	1
R164	401 024 7707	CARBON 100K JA 1/6W	1	R252	401 061 6503	OXIDE-MT 390 JB 1W	1
R165	401 024 7707	CARBON 100K JA 1/6W	1	The following Assy,PCB,S.Indicator is included in the Assy, PCB,Main.			
R166	401 027 0309	CARBON 47K JA 1/6W	1				
R167	401 027 0309	CARBON 47K JA 1/6W	1	620 200 1616	Assy,PCB,S.Indicator		4
R168	401 027 0309	CARBON 47K JA 1/6W	1	CN501	620 022 0552	Plug 14P L	1
R169	401 027 0309	CARBON 47K JA 1/6W	1	IC501	409 036 8002	IC M5228P	1
R170	401 017 0807	CARBON 270 JA 1/4W	1	IC502	409 143 7004	IC BA14741	1
R171	401 017 0807	CARBON 270 JA 1/4W	1	or	409 036 8002	IC M5228P	1
R172	401 024 7004	CARBON 1K JA 1/6W	1	C73	403 071 5903	CERAMIC	1
R173	401 024 7004	CARBON 1K JA 1/6W	1	C501	403 038 2303	ELECT 100U M 6.3V	1
R174	401 024 7707	CARBON 100K JA 1/6W	1	C502	403 056 8608	POLYESTER 1000P K 50V	1
R175	401 024 7707	CARBON 100K JA 1/6W	1	C503	403 058 8606	POLYESTER 1800P K 50V	1
R176	401 024 7707	CARBON 100K JA 1/6W	1	C504	403 061 2608	POLYESTER 3900P K 50V	1
R177	401 024 7707	CARBON 100K JA 1/6W	1	C505	403 063 0503	POLYESTER 6800P K 50V	1
R178	401 024 7707	CARBON 100K JA 1/6W	1	C506	403 059 0401	POLYESTER 0.018U K 50V	1
R179	401 024 7707	CARBON 100K JA 1/6W	1	C507	403 067 7409	MT-COMPO 0.039U J 50V	1
R182	401 026 9303	CARBON 47 JA 1/6W	1	C508	403 067 7706	MT-COMPO 0.047U J 50V	1
R183	401 026 9303	CARBON 47 JA 1/6W	1	C509	403 026 5408	CERAMIC 47P K 50V	1
R184	401 024 7707	CARBON 100K JA 1/6W	1	R501	401 025 1902	CARBON 15K JA 1/6W	1
R185	401 024 7707	CARBON 100K JA 1/6W	1	R502	401 014 5201	CARBON 15K JA 1/4W	1
R186	401 016 1508	CARBON 22 JA 1/4W	1	R503	401 025 1605	CARBON 1.5K JA 1/6W	1
R187	401 016 1508	CARBON 22 JA 1/4W	1	R504	401 027 5502	CARBON 6.8K JA 1/6W	1
R188	401 024 7707	CARBON 100K JA 1/6W	1	R505	401 025 1605	CARBON 1.5K JA 1/6W	1
R189	401 024 7707	CARBON 100K JA 1/6W	1	R506	401 026 9006	CARBON 43K JA 1/6W	1
R190	401 012 4503	CARBON 100 JA 1/4W	1	R507	401 024 7004	CARBON 1K JA 1/6W	1
R191	401 012 4503	CARBON 100 JA 1/4W	1	R508	401 027 7407	CARBON 75K JA 1/6W	1
R194	401 026 9303	CARBON 47 JA 1/6W	1	R509	401 024 7004	CARBON 1K JA 1/6W	1
R195	401 026 9303	CARBON 47 JA 1/6W	1	R510	401 027 9005	CARBON 82K JA 1/6W	1
R196	401 024 7707	CARBON 100K JA 1/6W	1	R511	401 024 7004	CARBON 1K JA 1/6W	1
R197	401 024 7707	CARBON 100K JA 1/6W	1	R512	401 024 8704	CARBON 110K JA 1/6W	1
R198	401 016 1508	CARBON 22 JA 1/4W	1	R513	401 024 7004	CARBON 1K JA 1/6W	1
R199	401 016 1508	CARBON 22 JA 1/4W	1	R514	401 024 8704	CARBON 110K JA 1/6W	1
R200	401 024 7707	CARBON 100K JA 1/6W	1	R515	401 024 7004	CARBON 1K JA 1/6W	1
R201	401 024 7707	CARBON 100K JA 1/6W	1	R516	401 025 0004	CARBON 120K JA 1/6W	1
R202	401 012 4503	CARBON 100 JA 1/4W	1	R517	401 024 7004	CARBON 1K JA 1/6W	1
R203	401 012 4503	CARBON 100 JA 1/4W	1	R518	401 026 1604	CARBON 270K JA 1/6W	1
R204	402 016 5503	FUSIBLE RES 47 J- 1/2W	1	R519	401 024 7004	CARBON 1K JA 1/6W	1
R205	402 016 5503	FUSIBLE RES 47 J- 1/2W	1	<b>ASSY,PCB,POWER SWITCH</b>			
R206	402 016 5503	FUSIBLE RES 47 J- 1/2W	1				
R207	401 019 1901	CARBON 3.9K JA 1/4W	1	33	620 080 8620	Assy,PCB,Power Switch	1
R208	401 014 4105	CARBON 1.5K JA 1/4W	1		620 055 4749	Jumper	1
R209	401 014 4105	CARBON 1.5K JA 1/4W	1	S601	△ 620 016 9073	Push Switch 1 Key	1
R210	401 013 5301	CARBON 1.2K JA 1/4W	1	<b>ASSY,PCB,SPECTRUM ANALYZER</b>			
R211	401 025 8208	CARBON 22K JA 1/6W	1				
R212	401 027 0309	CARBON 47K JA 1/6W	1	34	620 080 8637	Assy,PCB,Spectrum Analyzer	1
R213	401 024 7400	CARBON 10K JA 1/6W	1		620 055 4886	Jumper	1
R214	401 024 7707	CARBON 100K JA 1/6W	1	FL301	620 004 3021	Digitron BG-519G	1
R215	401 027 9005	CARBON 82K JA 1/6W	1	FL302	620 004 3021	Digitron BG-519G	1
R216	401 026 7408	CARBON 39K JA 1/6W	1	RA301	620 004 5186	Resistor 9X10K J	1
R217	401 021 4105	CARBON 56K JA 1/4W	1	RA302	620 004 5698	Resistor 7X100K	1
R218	401 012 7009	CARBON 10K JA 1/4W	1	RA303	620 004 5704	Resistor 13X100K	1
R219	401 012 4503	CARBON 100 JA 1/4W	1	RA304	620 004 5186	Resistor 9X10K J	1
R220	401 016 4806	CARBON 22K JA 1/4W	1	RA305	620 004 5698	Resistor 7X100K	1
R221	401 012 8105	CARBON 100K JA 1/4W	1	RA306	620 004 5704	Resistor 13X100K	1
R222	401 027 0507	CARBON 470K JA 1/6W	1	IC301	409 143 7004	IC BA14741	1
R223	401 012 7009	CARBON 10K JA 1/4W	1	IC302	409 143 7004	IC BA14741	1
R224	401 024 7400	CARBON 10K JA 1/6W	1	IC303	409 088 5806	IC LC7565	1
R225	401 024 7400	CARBON 10K JA 1/6W	1	IC304	409 020 6908	IC LC4011B	1
R226	401 027 0309	CARBON 47K JA 1/6W	1	IC305	409 021 0301	IC LC4913	1
R227	401 018 2800	CARBON 330 JA 1/4W	1	IC306	409 143 7004	IC BA14741	1
R228	401 012 4503	CARBON 100 JA 1/4W	1	IC307	409 143 7004	IC BA14741	1
R229	401 018 2800	CARBON 330 JA 1/4W	1	IC308	409 088 5806	IC LC7565	1
R230	401 012 4503	CARBON 100 JA 1/4W	1	D301	407 008 0405	DIODE GMB01-BT	1
R231	401 027 2105	CARBON 56 JA 1/6W	1				
R232	401 027 2105	CARBON 56 JA 1/6W	1				
R233	401 012 7009	CARBON 10K JA 1/4W	1				

## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
D302	407 008 0405	DIODE GMB01-BT	1	C339	403 062 5608	POLYESTER 5600P K 50V	1
D303	407 008 0405	DIODE GMB01-BT	1	C340	403 059 4102	POLYESTER 2200P K 50V	1
D304	407 008 0405	DIODE GMB01-BT	1	C341	403 062 5608	POLYESTER 5600P K 50V	1
D305	407 008 0405	DIODE GMB01-BT	1	C342	403 059 6601	POLYESTER 0.022U K 50V	1
D306	407 008 0405	DIODE GMB01-BT	1	C343	403 059 6601	POLYESTER 0.022U K 50V	1
D307	407 008 0405	DIODE GMB01-BT	1	C344	403 059 6601	POLYESTER 0.022U K 50V	1
D308	407 008 0405	DIODE GMB01-BT	1	C345	403 059 6601	POLYESTER 0.022U K 50V	1
D309	407 008 0405	DIODE GMB01-BT	1	C346	403 059 4102	POLYESTER 2200P K 50V	1
D310	407 008 0405	DIODE GMB01-BT	1	C347	403 059 4102	POLYESTER 2200P K 50V	1
D311	407 008 0405	DIODE GMB01-BT	1	C348	403 059 4102	POLYESTER 2200P K 50V	1
D312	407 008 0405	DIODE GMB01-BT	1	C349	403 059 4102	POLYESTER 2200P K 50V	1
D313	407 008 0405	DIODE GMB01-BT	1	C350	403 061 8709	POLYESTER 4700P K 50V	1
D314	407 008 0405	DIODE GMB01-BT	1	C351	403 061 8709	POLYESTER 4700P K 50V	1
D315	407 008 0405	DIODE GMB01-BT	1	C352	403 069 8404	CERAMIC 0.01U Z 50V	1
D316	407 008 0405	DIODE GMB01-BT	1	C353	403 038 2402	ELECT 100U M 6.3V	1
D317	407 008 0405	DIODE GMB01-BT	1	C354	403 069 8404	CERAMIC 0.01U Z 50V	1
D318	407 008 0405	DIODE GMB01-BT	1	C355	403 040 8508	ELECT 33U M 10V	1
D319	407 008 0405	DIODE GMB01-BT	1	C356	403 050 3708	ELECT 22U M 50V	1
D320	407 008 0405	DIODE GMB01-BT	1	C357	403 050 3708	ELECT 22U M 50V	1
D321	407 008 0405	DIODE GMB01-BT	1	C358	403 050 3708	ELECT 22U M 50V	1
D322	407 008 0405	DIODE GMB01-BT	1	C359	403 050 3708	ELECT 22U M 50V	1
D323	407 008 0405	DIODE GMB01-BT	1	C360	403 050 3708	ELECT 22U M 50V	1
D324	407 008 0405	DIODE GMB01-BT	1	C361	403 050 3708	ELECT 22U M 50V	1
D325	407 008 0405	DIODE GMB01-BT	1	C362	403 050 3708	ELECT 22U M 50V	1
D326	407 008 0405	DIODE GMB01-BT	1	C363	403 050 3708	ELECT 22U M 50V	1
D327	407 008 0405	DIODE GMB01-BT	1	C364	403 040 8508	ELECT 33U M 10V	1
D328	407 008 0405	DIODE GMB01-BT	1	C365	403 058 1607	POLYESTER 1500P K 50V	1
D329	407 008 0405	DIODE GMB01-BT	1	C366	403 069 8404	CERAMIC 0.01U Z 50V	1
D330	407 008 0405	DIODE GMB01-BT	1	R301	401 025 1902	CARBON 15K JA 1/6W	1
D331	407 008 0405	DIODE GMB01-BT	1	R302	401 025 3005	CARBON 1.6K JA 1/6W	1
D332	407 008 0405	DIODE GMB01-BT	1	R303	401 028 0308	CARBON 91K JA 1/6W	1
D333	407 008 0405	DIODE GMB01-BT	1	R304	401 028 0308	CARBON 91K JA 1/6W	1
D334	407 008 0405	DIODE GMB01-BT	1	R305	401 025 3005	CARBON 1.6K JA 1/6W	1
Q301	405 035 7305	TR DTC144TF	1	R306	401 025 1902	CARBON 15K JA 1/6W	1
Q302	405 035 7305	TR DTC144TF	1	R307	401 027 4307	CARBON 6.2K JA 1/6W	1
Q303	405 035 7305	TR DTC144TF	1	R308	401 028 0308	CARBON 91K JA 1/6W	1
Q304	405 035 7305	TR DTC144TF	1	R309	401 027 4307	CARBON 6.2K JA 1/6W	1
Q305	405 034 8501	TR DTA144-TF	1	R310	401 026 6302	CARBON 360K JA 1/6W	1
Q306	405 034 8501	TR DTA144-TF	1	R311	401 028 0506	CARBON 910K JA 1/6W	1
Q307	405 035 7305	TR DTC144TF	1	R312	401 025 3302	CARBON 16K JA 1/6W	1
Q308	405 035 7305	TR DTC144TF	1	R313	401 025 2305	CARBON 150K JA 1/6W	1
C301	403 059 4102	POLYESTER 2200P K 50V	1	R314	401 024 8704	CARBON 110K JA 1/6W	1
C302	403 059 4102	POLYESTER 2200P K 50V	1	R315	401 027 6103	CARBON 680K JA 1/6W	1
C303	403 062 5608	POLYESTER 5600P K 50V	1	R316	401 024 9701	CARBON 12K JA 1/6W	1
C304	403 062 5608	POLYESTER 5600P K 50V	1	R317	401 027 3201	CARBON 560K JA 1/6W	1
C305	403 059 6601	POLYESTER 0.022U K 50V	1	R318	401 024 7400	CARBON 10K JA 1/6W	1
C306	403 059 6601	POLYESTER 0.022U K 50V	1	R319	401 025 7409	CARBON 220 JA 1/6W	1
C307	403 059 6601	POLYESTER 0.022U K 50V	1	R320	401 025 7409	CARBON 220 JA 1/6W	1
C308	403 059 6601	POLYESTER 0.022U K 50V	1	R321	401 025 7409	CARBON 220 JA 1/6W	1
C309	403 059 4102	POLYESTER 2200P K 50V	1	R322	401 025 7409	CARBON 220 JA 1/6W	1
C310	403 059 4102	POLYESTER 2200P K 50V	1	R323	401 025 7409	CARBON 220 JA 1/6W	1
C311	403 059 4102	POLYESTER 2200P K 50V	1	R324	401 025 7409	CARBON 220 JA 1/6W	1
C312	403 059 4102	POLYESTER 2200P K 50V	1	R325	401 025 7409	CARBON 220 JA 1/6W	1
C313	403 061 8709	POLYESTER 4700P K 50V	1	R326	401 025 7409	CARBON 220 JA 1/6W	1
C314	403 061 8709	POLYESTER 4700P K 50V	1	R327	401 027 4000	CARBON 620 JA 1/6W	1
C315	403 069 8404	CERAMIC 0.01U Z 50V	1	R328	401 026 6104	CARBON 36K JA 1/6W	1
C316	403 038 2402	ELECT 100U M 6.3V	1	R329	401 026 1307	CARBON 27K JA 1/6W	1
C317	403 040 8508	ELECT 33U M 10V	1	R330	401 024 7707	CARBON 100K JA 1/6W	1
C318	403 050 3708	ELECT 22U M 50V	1	R331	401 024 7707	CARBON 100K JA 1/6W	1
C319	403 050 3708	ELECT 22U M 50V	1	R332	401 025 4606	CARBON 18K JA 1/6W	1
C320	403 050 3708	ELECT 22U M 50V	1	R333	401 026 9600	CARBON 470 JA 1/6W	1
C321	403 050 3708	ELECT 22U M 50V	1	R334	401 024 7707	CARBON 100K JA 1/6W	1
C322	403 050 3708	ELECT 22U M 50V	1	R335	401 024 7707	CARBON 100K JA 1/6W	1
C323	403 050 3708	ELECT 22U M 50V	1	R336	401 024 7707	CARBON 100K JA 1/6W	1
C324	403 050 3708	ELECT 22U M 50V	1	R337	401 026 6609	CARBON 390 JA 1/6W	1
C325	403 050 3708	ELECT 22U M 50V	1	R338	401 026 6609	CARBON 390 JA 1/6W	1
C326	403 040 8508	ELECT 33U M 10V	1	R340	401 024 7707	CARBON 100K JA 1/6W	1
C327	403 058 1607	POLYESTER 1500P K 50V	1	R341	401 024 7707	CARBON 100K JA 1/6W	1
C328	403 046 7208	ELECT 330U M 25V	1	R342	401 027 0309	CARBON 47K JA 1/6W	1
C329	403 050 3708	ELECT 22U M 50V	1	R344	401 024 7707	CARBON 100K JA 1/6W	1
C330	403 046 7208	ELECT 330U M 25V	1	R345	401 027 0309	CARBON 47K JA 1/6W	1
C331	403 049 1708	ELECT 1U M 50V	1	R346	401 024 7400	CARBON 10K JA 1/6W	1
C332	403 068 9105	CERAMIC 100P K 50V	1	R347	401 027 0309	CARBON 47K JA 1/6W	1
C333	403 068 9105	CERAMIC 100P K 50V	1	R348	401 024 7707	CARBON 100K JA 1/6W	1
C334	403 046 7208	ELECT 330U M 25V	1	R349	401 024 7707	CARBON 100K JA 1/6W	1
C335	403 049 1708	ELECT 1U M 50V	1	R350	401 027 0309	CARBON 47K JA 1/6W	1
C336	403 050 3708	ELECT 22U M 50V	1	R351	401 026 6609	CARBON 390 JA 1/6W	1
C337	403 046 7208	ELECT 330U M 25V	1	R352	401 026 6609	CARBON 390 JA 1/6W	1
C338	403 059 4102	POLYESTER 2200P K 50V	1	R353	401 024 7707	CARBON 100K JA 1/6W	1



## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
R354	401 026 9600	CARBON 470 JA 1/6W	1	SW429	620 016 7819	Tact Switch 160G	1
R355	401 024 7707	CARBON 100K JA 1/6W	1	SW430	620 016 7819	Tact Switch 160G	1
R356	401 025 1902	CARBON 15K JA 1/6W	1	SW431	620 016 7819	Tact Switch 160G	1
R357	401 025 1902	CARBON 15K JA 1/6W	1	SW432	620 016 7819	Tact Switch 160G	1
R358	401 027 4307	CARBON 6.2K JA 1/6W	1	SW433	620 016 7819	Tact Switch 160G	1
R359	401 028 0308	CARBON 91K JA 1/6W	1	SW434	620 016 7819	Tact Switch 160G	1
R360	401 027 4604	CARBON 62K JA 1/6W	1	SW435	620 016 7819	Tact Switch 160G	1
R361	401 025 2305	CARBON 150K JA 1/6W	1	SW436	620 016 7819	Tact Switch 160G	1
R362	401 024 8704	CARBON 110K JA 1/6W	1	SW437	620 016 7819	Tact Switch 160G	1
R363	401 025 3302	CARBON 16K JA 1/6W	1	SW438	620 016 7819	Tact Switch 160G	1
R364	401 028 0506	CARBON 910K JA 1/6W	1	SW439	620 016 7819	Tact Switch 160G	1
R365	401 027 4307	CARBON 6.2K JA 1/6W	1	SW440	620 016 7819	Tact Switch 160G	1
R366	401 026 6302	CARBON 360K JA 1/6W	1	SW441	620 016 7819	Tact Switch 160G	1
R367	401 025 3005	CARBON 1.6K JA 1/6W	1	SW442	620 016 7819	Tact Switch 160G	1
R368	401 028 0308	CARBON 91K JA 1/6W	1	SW443	620 016 7819	Tact Switch 160G	1
R369	401 025 3005	CARBON 1.6K JA 1/6W	1	SW444	620 016 7819	Tact Switch 160G	1
R370	401 028 0308	CARBON 91K JA 1/6W	1	SW445	620 016 7819	Tact Switch 160G	1
R371	401 026 1307	CARBON 27K JA 1/6W	1	SW446	620 016 7819	Tact Switch 160G	1
R372	401 026 6104	CARBON 36K JA 1/6W	1	SW447	620 016 7819	Tact Switch 160G	1
R373	401 027 4000	CARBON 620 JA 1/6W	1	SW448	620 016 7819	Tact Switch 160G	1
R374	401 027 3201	CARBON 560K JA 1/6W	1	SW449	620 016 7819	Tact Switch 160G	1
R375	401 027 6103	CARBON 680K JA 1/6W	1	SW450	620 016 7819	Tact Switch 160G	1
R376	401 024 7400	CARBON 10K JA 1/6W	1	SW451	620 016 7819	Tact Switch 160G	1
R377	401 024 9701	CARBON 12K JA 1/6W	1	SW452	620 016 7819	Tact Switch 160G	1
R378	401 025 7409	CARBON 220 JA 1/6W	1	SW453	620 016 7819	Tact Switch 160G	1
R379	401 025 7409	CARBON 220 JA 1/6W	1	VR401	620 182 6845	Slide VR 10KA	1
R380	401 025 7409	CARBON 220 JA 1/6W	1	VR402	620 182 6845	Slide VR 10KA	1
R381	401 025 7409	CARBON 220 JA 1/6W	1	D401	407 008 0405	DIODE GMB01-BT	1
R382	401 025 7409	CARBON 220 JA 1/6W	1	D402	407 008 0405	DIODE GMB01-BT	1
R383	401 025 7409	CARBON 220 JA 1/6W	1	D403	407 008 0405	DIODE GMB01-BT	1
R384	401 025 7409	CARBON 220 JA 1/6W	1	D404	407 008 0405	DIODE GMB01-BT	1
R385	401 025 7409	CARBON 220 JA 1/6W	1	D405	407 008 0405	DIODE GMB01-BT	1
R386	401 024 7707	CARBON 100K JA 1/6W	1	D406	407 008 0405	DIODE GMB01-BT	1
R387	401 024 7707	CARBON 100K JA 1/6W	1	D407	407 008 0405	DIODE GMB01-BT	1
R388	401 025 4606	CARBON 18K JA 1/6W	1	D408	407 008 0405	DIODE GMB01-BT	1
R389	401 024 7707	CARBON 100K JA 1/6W	1	D409	407 008 0405	DIODE GMB01-BT	1
R390	401 024 7707	CARBON 100K JA 1/6W	1	D410	407 008 0405	DIODE GMB01-BT	1
R391	401 024 7707	CARBON 100K JA 1/6W	1	D411	407 008 0405	DIODE GMB01-BT	1
R392	401 024 7707	CARBON 100K JA 1/6W	1	D412	407 008 0405	DIODE GMB01-BT	1
R393	401 024 7400	CARBON 10K JA 1/6W	1	D413	407 008 0405	DIODE GMB01-BT	1
R394	401 027 4604	CARBON 62K JA 1/6W	1	D414	407 008 0405	DIODE GMB01-BT	1
<b>ASSY,PCB,SWITCH</b>				D415	407 008 0405	DIODE GMB01-BT	1
35	620 080 8644	Assy,PCB,Switch	1	D416	407 008 0405	DIODE GMB01-BT	1
	620 052 0218	Spacer 1	1	D417	407 008 0405	DIODE GMB01-BT	1
	620 052 0225	Spacer 2	2	D418	407 008 0405	DIODE GMB01-BT	1
	620 125 0220	Cushion	2	D419	407 008 0405	DIODE GMB01-BT	1
	620 055 4886	Jumper	1	D420	407 008 0405	DIODE GMB01-BT	1
	620 183 1306	Jumper	1	D421	407 008 0405	DIODE GMB01-BT	1
	620 055 4879	Jumper	1	D422	407 008 0405	DIODE GMB01-BT	1
	620 183 1313	Jumper	1	D423	407 008 0405	DIODE GMB01-BT	1
SW401	620 016 7819	Tact Switch 160G	1	D424	407 008 0405	DIODE GMB01-BT	1
SW402	620 016 7819	Tact Switch 160G	1	D425	407 008 0405	DIODE GMB01-BT	1
SW403	620 016 7819	Tact Switch 160G	1	D426	407 008 0405	DIODE GMB01-BT	1
SW404	620 016 7819	Tact Switch 160G	1	D427	407 008 0405	DIODE GMB01-BT	1
SW405	620 016 7819	Tact Switch 160G	1	D428	407 008 0405	DIODE GMB01-BT	1
SW406	620 016 7819	Tact Switch 160G	1	D429	407 008 0405	DIODE GMB01-BT	1
SW407	620 016 7819	Tact Switch 160G	1	D430	407 008 0405	DIODE GMB01-BT	1
SW408	620 016 7819	Tact Switch 160G	1	D431	407 008 0405	DIODE GMB01-BT	1
SW409	620 016 7819	Tact Switch 160G	1	D432	407 008 0405	DIODE GMB01-BT	1
SW410	620 016 7819	Tact Switch 160G	1	D433	407 008 0405	DIODE GMB01-BT	1
SW411	620 016 7819	Tact Switch 160G	1	D434	407 008 0405	DIODE GMB01-BT	1
SW412	620 016 7819	Tact Switch 160G	1	D435	407 008 0405	DIODE GMB01-BT	1
SW413	620 016 7819	Tact Switch 160G	1	D436	407 008 0405	DIODE GMB01-BT	1
SW414	620 016 7819	Tact Switch 160G	1	D437	407 008 0405	DIODE GMB01-BT	1
SW415	620 016 7819	Tact Switch 160G	1	D438	407 008 0405	DIODE GMB01-BT	1
SW416	620 016 7819	Tact Switch 160G	1	D439	407 008 0405	DIODE GMB01-BT	1
SW417	620 016 7819	Tact Switch 160G	1	D440	407 008 0405	DIODE GMB01-BT	1
SW418	620 016 7819	Tact Switch 160G	1	D441	407 008 0405	DIODE GMB01-BT	1
SW419	620 016 7819	Tact Switch 160G	1	D442	407 008 0405	DIODE GMB01-BT	1
SW420	620 016 7819	Tact Switch 160G	1	D443	407 008 0405	DIODE GMB01-BT	1
SW421	620 016 7819	Tact Switch 160G	1	D444	407 008 0405	DIODE GMB01-BT	1
SW422	620 016 7819	Tact Switch 160G	1	D445	407 008 0405	DIODE GMB01-BT	1
SW423	620 016 7819	Tact Switch 160G	1	D446	407 008 0405	DIODE GMB01-BT	1
SW424	620 016 7819	Tact Switch 160G	1	D447	407 008 0405	DIODE GMB01-BT	1
SW425	620 016 7819	Tact Switch 160G	1	D448	407 008 0405	DIODE GMB01-BT	1
SW426	620 016 7819	Tact Switch 160G	1	D449	407 008 0405	DIODE GMB01-BT	1
SW427	620 016 7819	Tact Switch 160G	1	D450	407 008 0405	DIODE GMB01-BT	1
SW428	620 016 7819	Tact Switch 160G	1	D451	407 008 0405	DIODE GMB01-BT	1
				D452	407 008 0405	DIODE GMB01-BT	1

## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
D453	407 008 0405	DIODE GMB01-BT	1
D454	407 086 0403	LED SLP-973B-51	1
D455	407 086 0403	LED SLP-973B-51	1
D456	407 086 0403	LED SLP-973B-51	1
D457	407 086 0403	LED SLP-973B-51	1
D458	407 086 0403	LED SLP-973B-51	1
D459	407 086 0403	LED SLP-973B-51	1
D460	407 035 3400	LED SLP-673B-51	1
D461	407 035 3400	LED SLP-673B-51	1
D462	407 028 7903	LED SLP-171E	1
D463	407 028 7903	LED SLP-171E	1

### NOTES:

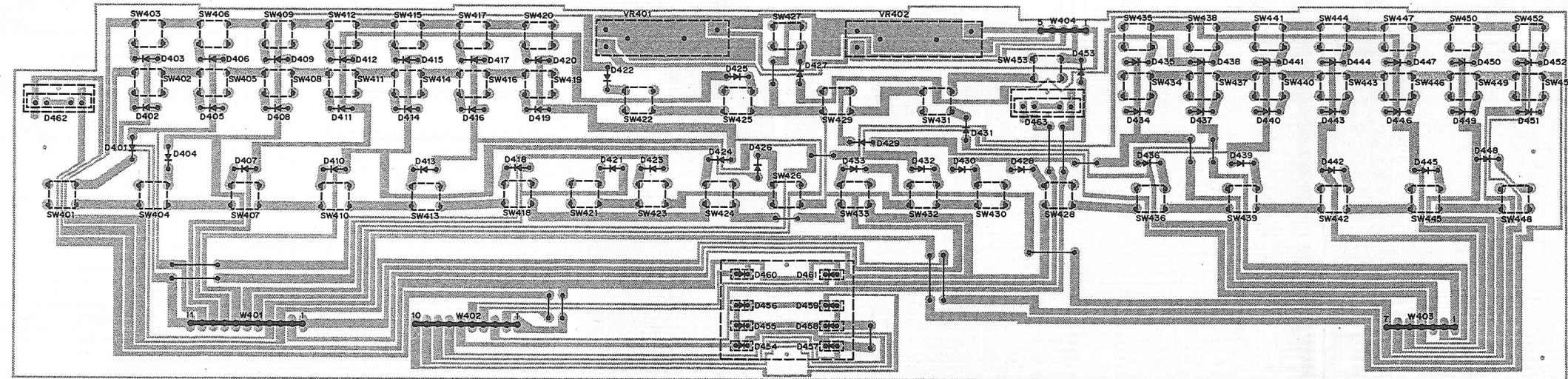
1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

### PRODUCT SAFETY NOTICE

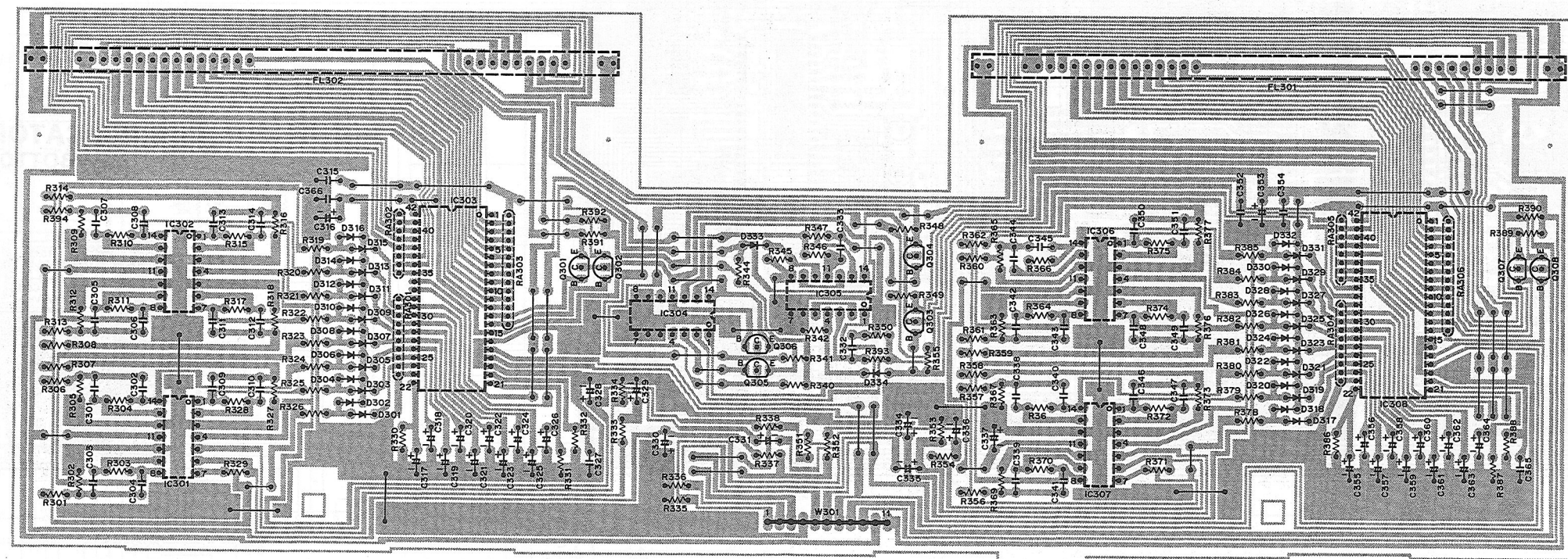
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  $\Delta$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.



# SWITCH P.C.BOARD (BOTTOM VIEW)



# SPECTRUM ANALYZER P.C.BOARD (BOTTOM VIEW)

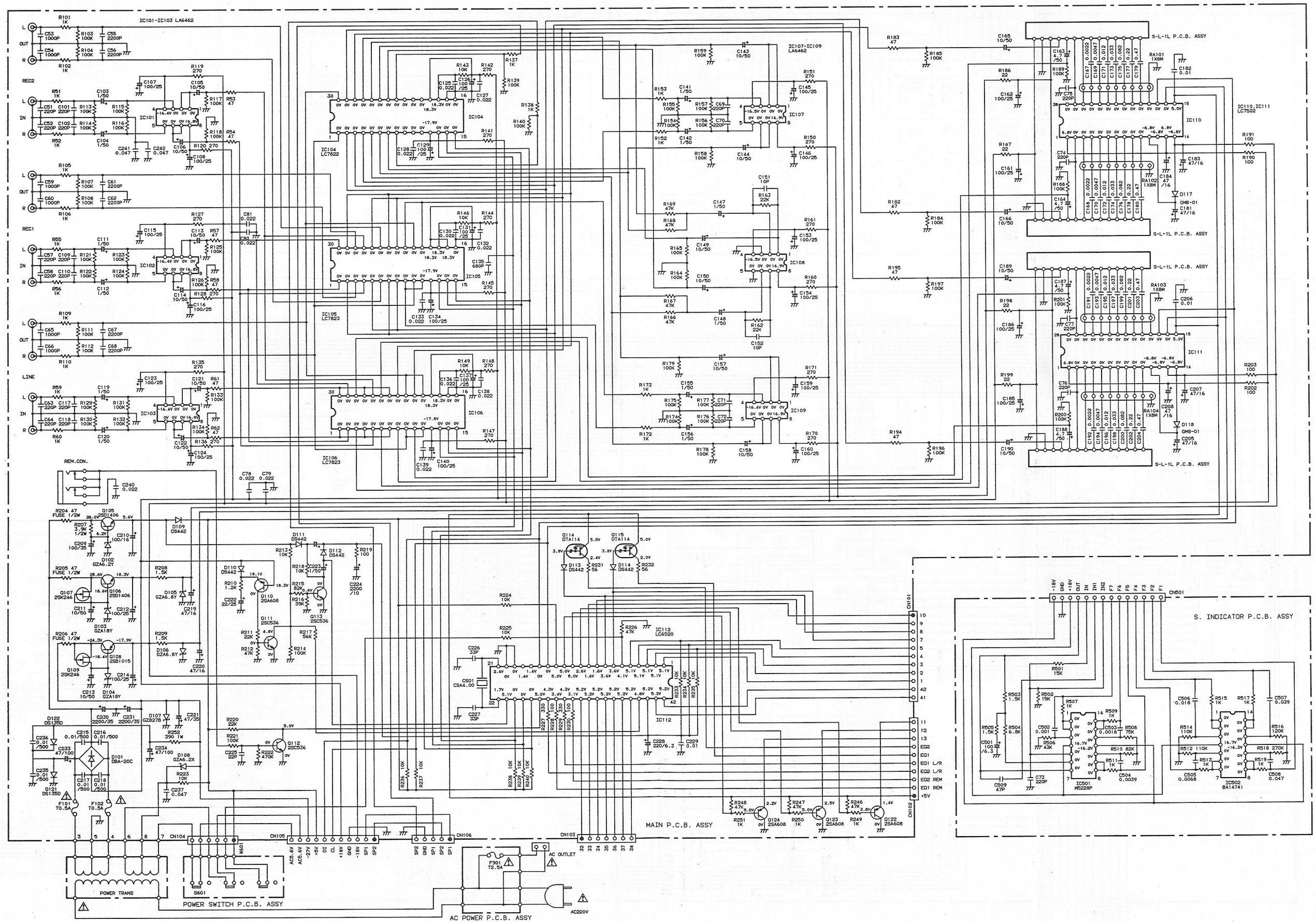






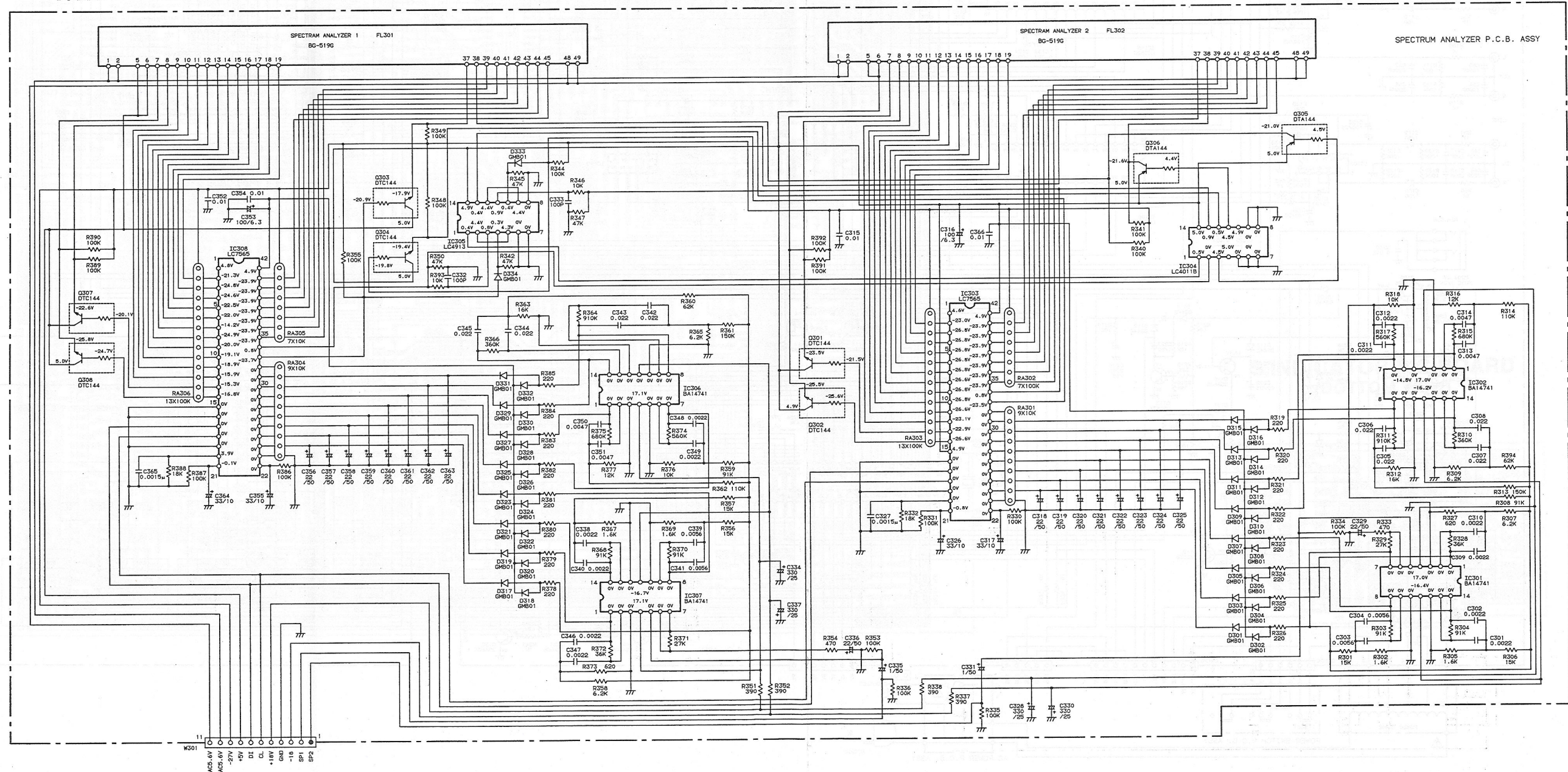
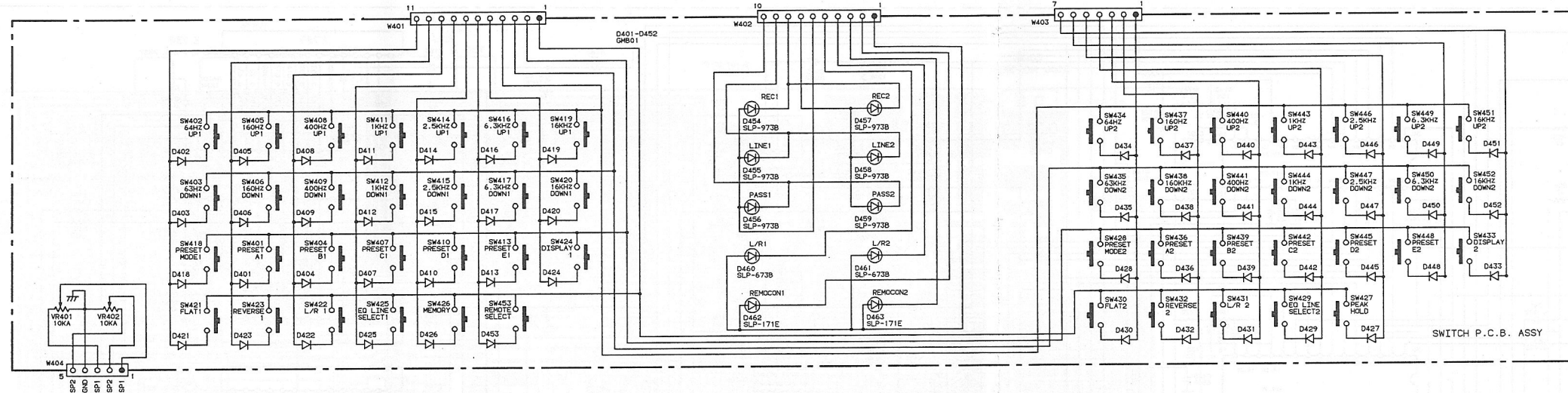


# SCHEMATIC DIAGRAM (1)



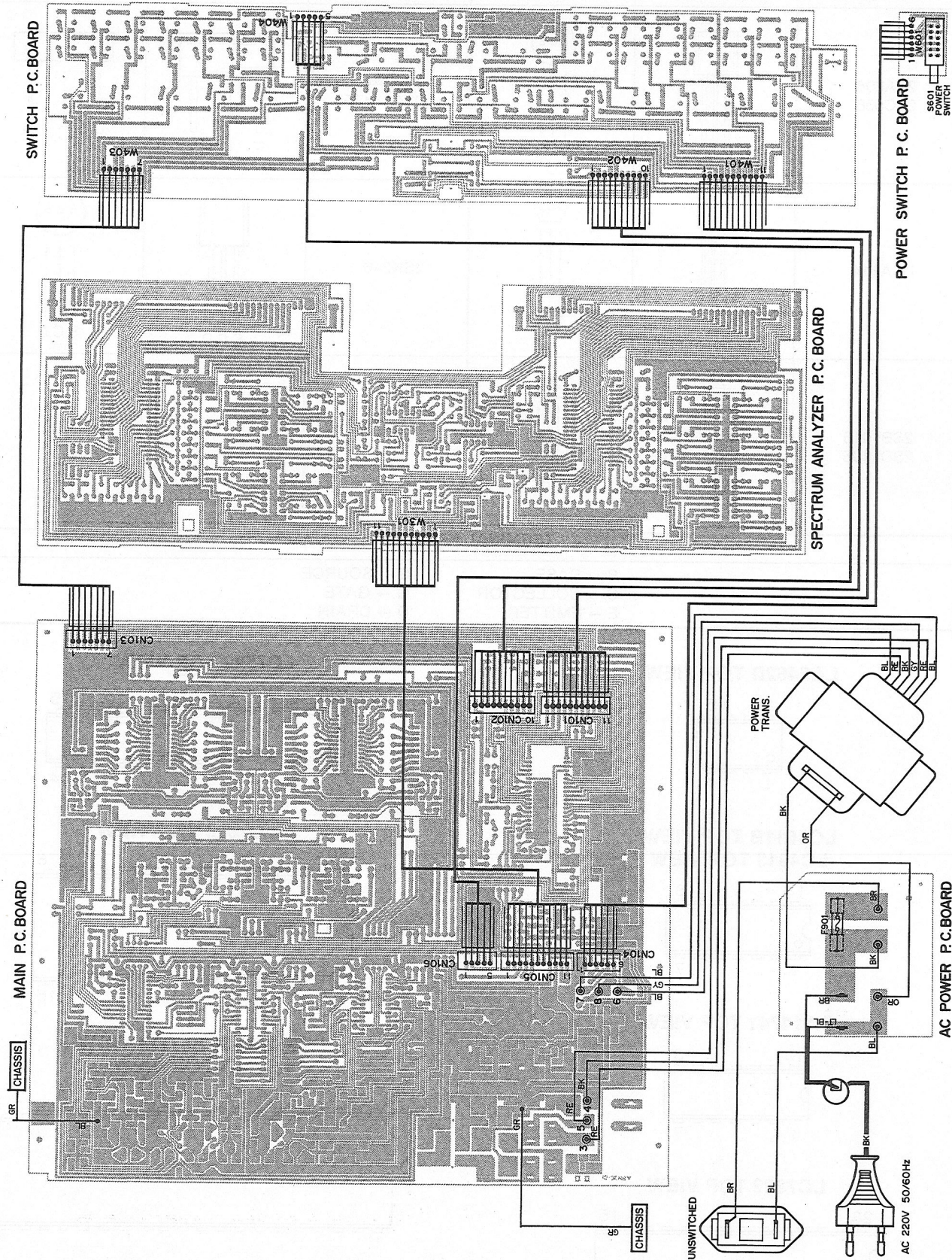


### SCHEMATIC DIAGRAM (2)





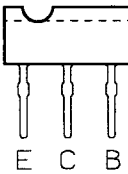
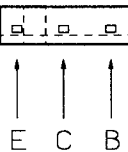




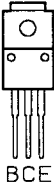



# WIRING DIAGRAM

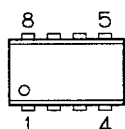




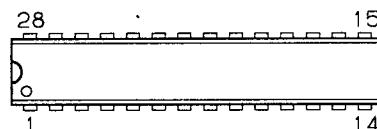
## IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW	TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA608 2SC536			DTA144 DTC144TF		
DTA114			2SK246		
2SB1015 2SD1406					
<b>TERMINAL NAME</b>					
B → BASE C → COLLECTOR E → EMITTER			S → SOURCE G → GATE D → DRAIN		

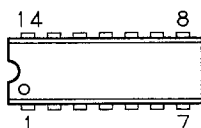
**LA6462D TOP VIEW**



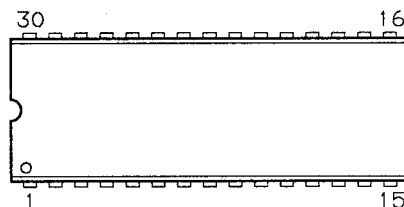
**LC7522 TOP VIEW**



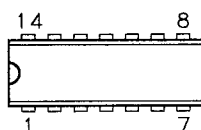
**LC4011B TOP VIEW  
LC4913 TOP VIEW**



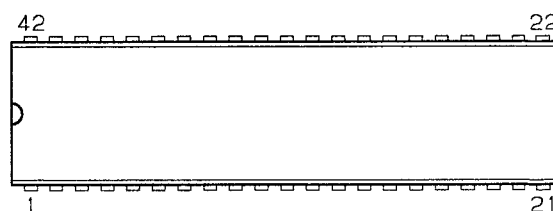
**LC7823 TOP VIEW**



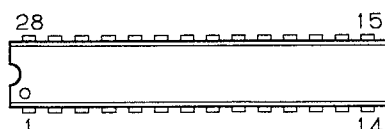
**BA14741 TOP VIEW**



**LC6520C-3629 TOP VIEW  
LC7565 TOP VIEW**



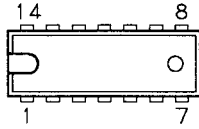
**LC7822 TOP VIEW**





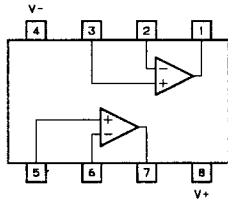
## IC & TRANSISTOR LEAD IDENTIFICATION (Continued)

**M5228P TOP VIEW**

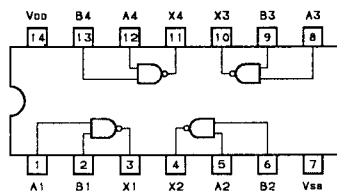


## IC BLOCK DIAGRAM

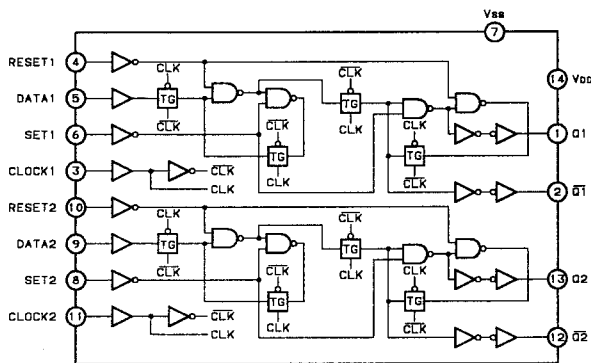
**LA6462D BLOCK DIAGRAM**



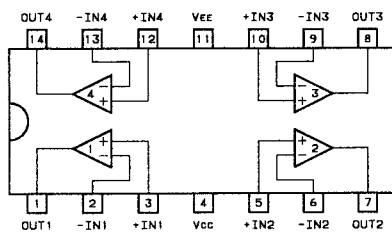
**LC4011B BLOCK DIAGRAM**



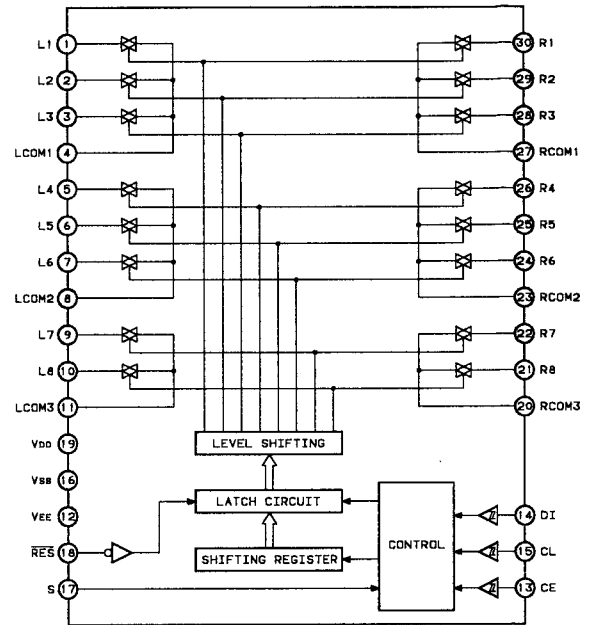
**LC4913 BLOCK DIAGRAM**



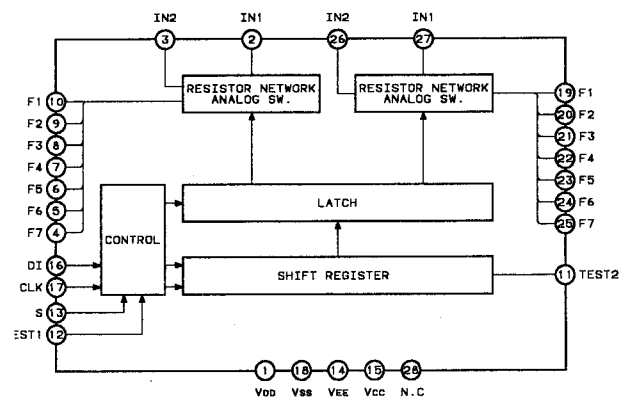
**BA14741 BLOCK DIAGRAM**  
**M5228P BLOCK DIAGRAM**



**LC7822 BLOCK DIAGRAM**

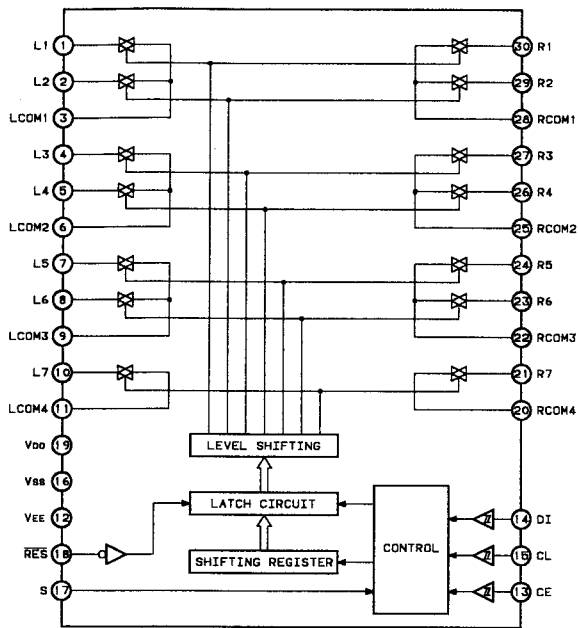


**LC7522 BLOCK DIAGRAM**

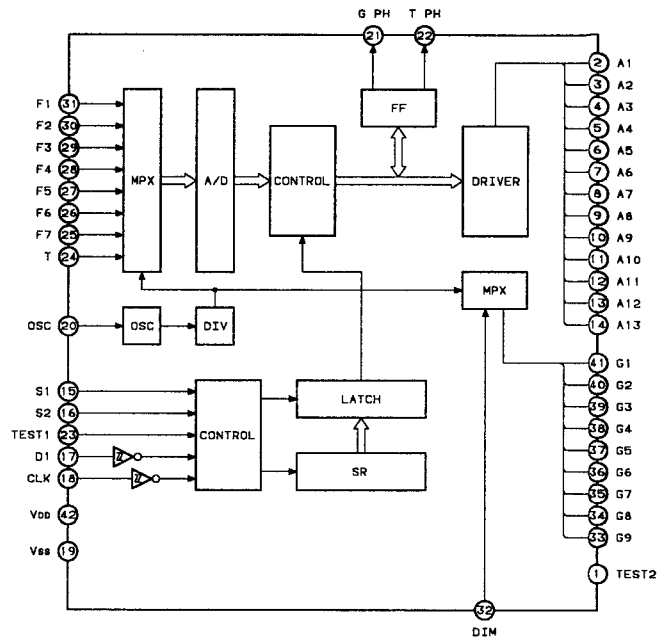


## IC BLOCK DIAGRAM (Continued)

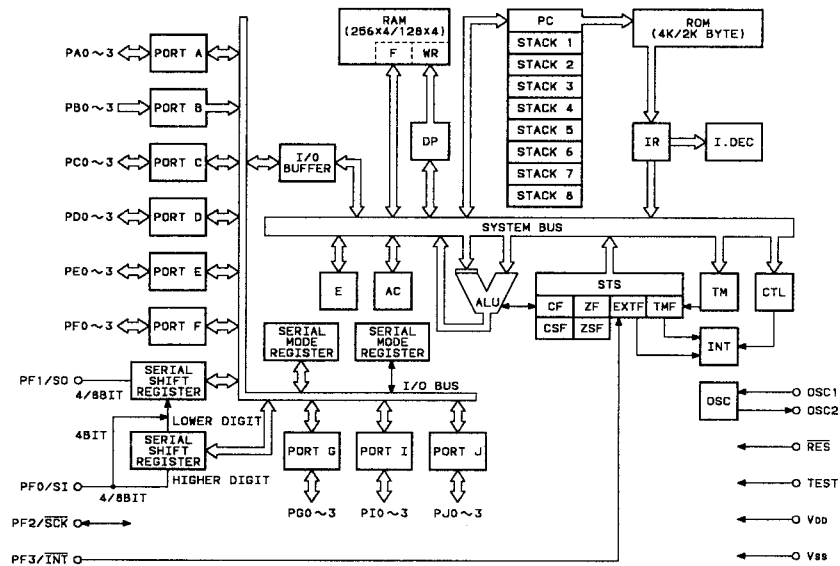
### LC7823 BLOCK DIAGRAM



### LC7565 BLOCK DIAGRAM



### LC6520C-3629 BLOCK DIAGRAM



Bezeichnung/Description

SERVICE MANUAL

Teile-Nr./Parts No.

WM570267

Menge/Quantity

1

Lagerort

32E03

LS-Nr.

817262 / 44

SANYO FISHER Vertriebs GmbH

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